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SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT,  
VANCOUVER ISLAND REGION, 11 DECEMBER 1975

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**SPECIAL DATA COLLECTION SYSTEM EVENT REPORT**  
**Vancouver Island Region, 11 December 1975**

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**March 1976**

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**312 Montgomery Street, Alexandria, Virginia 22314**



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## SDCS EVENT REPORT NO. 75

Vancouver Island Region, 11 December 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Lat.	Long.	$m_b$	$M_s$
NORSAR	07:13:52.5	07:03:09	49 N	129 W	4.5	N/A

Using SDCS stations and NORSAR, the epicenter location and magnitudes become

07:03:13.0	50.2N	129.9W	4.8	4.1
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All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at WH2YK, HN-ME, RK-ON, FN-WV and NORSAR. CPSO did not record a "P" arrival for this event and was not included in this report. Horizontal SP channels at WH2YK, HN-ME, RK-ON and FN-WV were rotated. LASA SP data were not recoverable.

Long-period signals were recorded at all SDCS stations, ALPA and NORSAR. The LP vertical channel at CPSO was not responding properly. Polarity of the LP radial channel at RK-ON was reversed; to correct this, a mathematical inversion of the LP radial data was performed before the horizontal channels were rotated. Horizontal LP channels at all SDCS stations were rotated. Validity of ALPA and NORSAR long-period vertical beams is questionable and horizontal beams were not included because of program recovery problems. LASA long-period data were not included due to complicated recovery procedures.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of the NORSAR short-period plot. Scaling factors are not reported for NORSAR short-period.

## STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES		ELEVATION METERS	INSTRUMENTATION	
		DEG	MN SECS		SHORT - PERIOD	LONG - PERIOD
ALPA	Alaska	65 14	00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35	41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32	58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41	19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09	43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49	25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50	20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41	41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be 316° + 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

## HYPOCENTER DETERMINATION

INPUT FOR EVENT 11 DEC 75  
 07:03:27.0 52.000N 128.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CAIC	REST		
WH2YK	07 05 49.8	0.1	0.1	10.9	346.8
FK-CN	07 08 16.6	-0.6	-0.6	22.9	74.3
FN-WV	07 10 24.9	-0.2	-0.1	37.2	88.4
HN-ME	07 10 53.2	1.0	1.0	40.5	70.9
NAC	07 13 52.5	-0.3	-0.4	64.9	20.0

## 67 HERRIN TRAVEL TIME TABLES

CFIGIN	LAT.	LCNG.	DEPTH (KM)	SDV	IT	STA
07:03:13.5	50.186N	129.915W	3. CAIC	0.6	5	5
07:03:13.0	50.168N	129.932W	0. REST	0.6	4	5

CAIC				REST			
0	.	1		0	.	1	
0	.		0	0	.		0
0	1.	1	2	0	1.	1	2
.	.	.	.	.	.	.	.
0	0.	0	0	0	0.	0	0
0	.		0	0	.		0
0	.	0		0	.	0	

CHI2 COVERAGE ELLIPSE: 95 PER CENT CONF..LEVEL, SDV= 1.75  
 MAJCF 217.6KM. MINCF 32.7KM. AZ= 43 AREA= 22338 SQ.KM. REST



## DATA SUMMARY

INPUT FOR EVENT 11 DEC 75  
 07:03:27.0 52.000N 128.000W 0KM.

STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIF	DIST
		TIME					MP	MS		
WH2YKM	EP	07 05 49.2		SPZ	0.4	14.	5.05			10.9
WH2YK	IQ	07 09 10.0		LPT	18.0	1721.				
WH2YK	IR	07 10 09.0		IPZ	12.0	800.		5.06		10.9
ALFA	IR	07 13 00.0		IPZ	23.0	19.		3.65		17.7
FK-CN	EP	07 08 16.6		SPZ	0.8	62.	4.79			22.9
FK-CN	IQ	07 15 53.0		LPT	20.0	788.				
FK-CN	IR	07 17 24.0		IPZ	16.0	637.		5.28		22.9
CFSC	IQ	07 22 08.0		LPT	21.0	134.				
FN-WV	EP	07 10 24.9		SPZ	1.4	56.	4.95			37.2
FN-WV	IQ	07 23 33.0		LPT	15.0	418.				
FN-WV	IR	07 26 05.0		IPZ	16.0	315.		5.19		37.2
HN-ME	EP	07 10 53.2		SPZ	0.9	23.	4.51			40.5
HN-ME	IQ	07 24 56.0		LPT	18.0	565.				
HN-ME	IR	07 27 41.0		IPZ	15.0	414.		5.34		40.5
NAC	EP	07 13 52.5		AE	1.3	22.	5.04			64.9
NAC	IR	07 43 10.0		IPZ	19.0	34.		4.46		64.9

CFIGIN	IAT.	ICNG.	DEPTH (KM)	MAG	SDV	STA	IPMAG	LFSDV	LPSTA
07:03:13.5	50.186N	129.915W	3. CALC	4.82	0.23	4	4.06	0.6	2
07:03:13.0	50.168N	129.932W	0. FEST	4.82	0.23	4	4.06	0.6	2

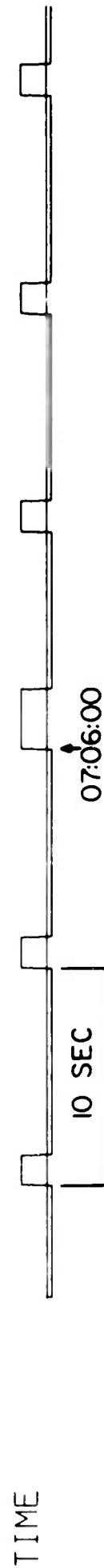
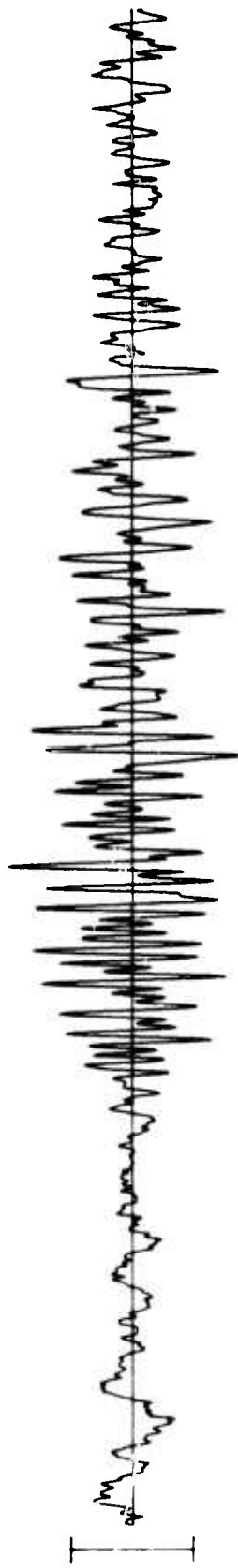
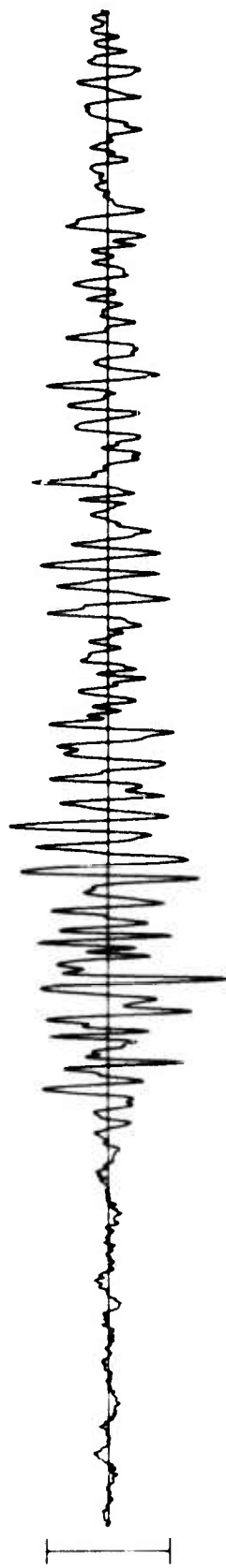
WH2YK NOT USED IN CALC RUN SF AVG. MAG.  
 WH2YK NOT USED IN FEST RUN SF AVG. MAG.

Short-period magnitudes ( $m_b$ ) used in averaging are restricted to those recorded at distances between 20 and 110 degrees from the epicenter.

Average long-period magnitude ( $M_s$ ) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

5<

WH2YK 11 DEC 75



6<

HK-ON 11 DEC 75

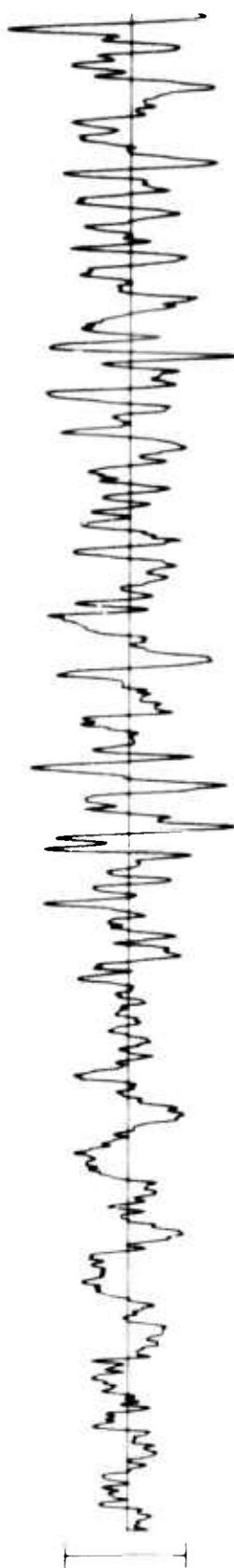
SPZ  
56.39 MU



SPR  
48.10 MU



SPT  
19.64 MU



TIME

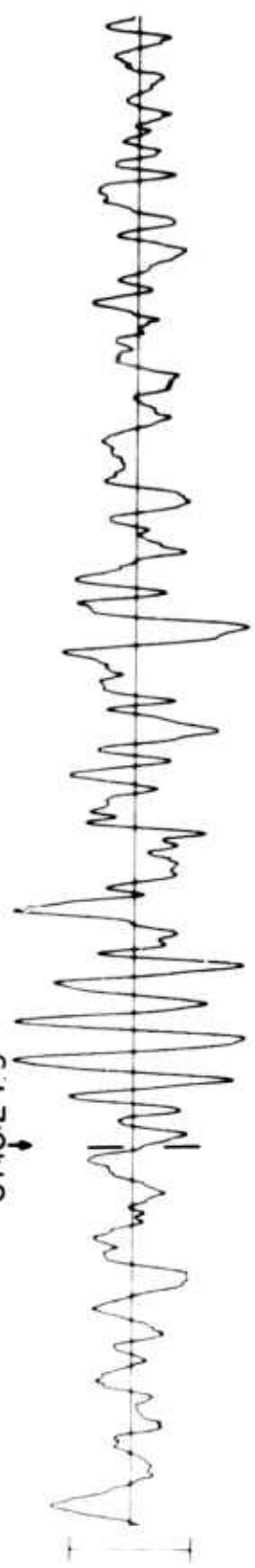


7<

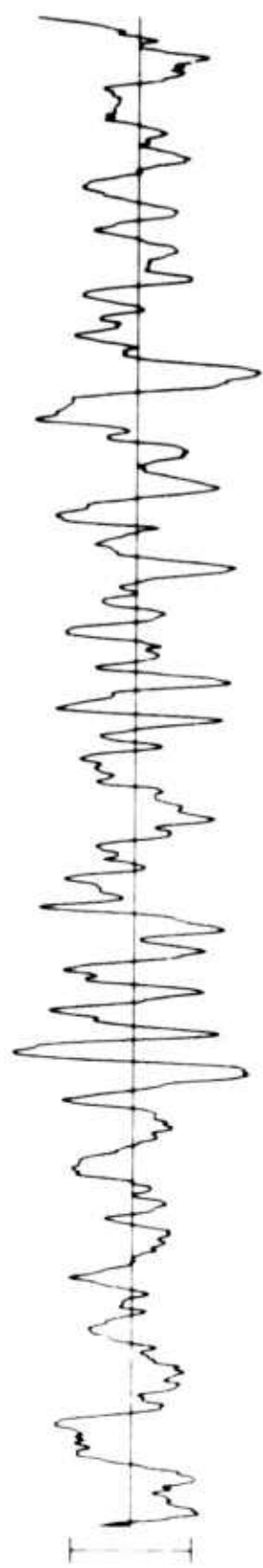
FN-WV 11 DEC 75

07:10:24.9

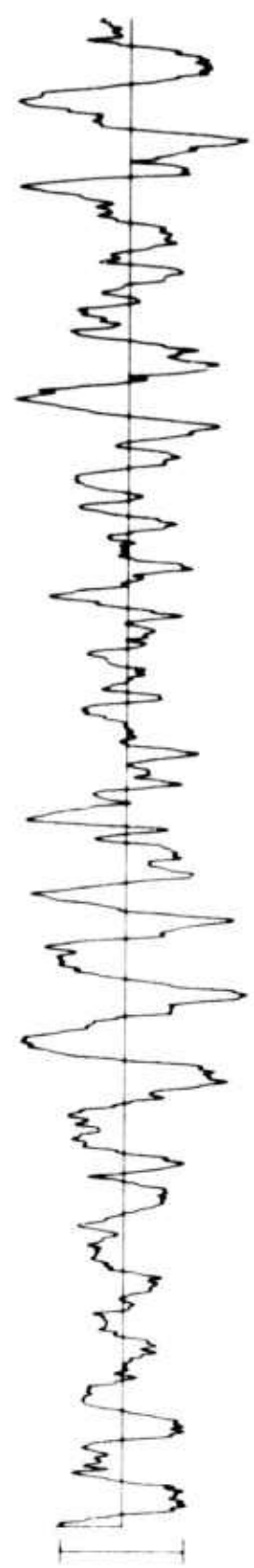
SPZ  
21.01 MU



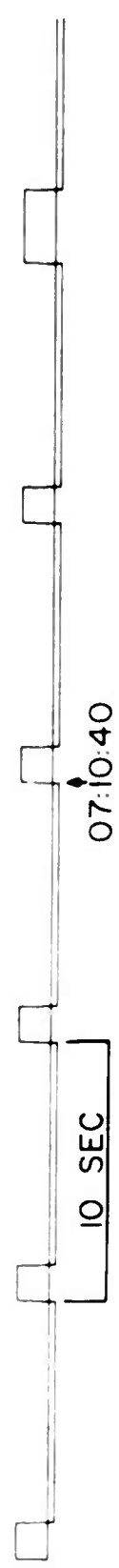
SPR  
17.73 MU



SPT  
14.43 MU



TIME

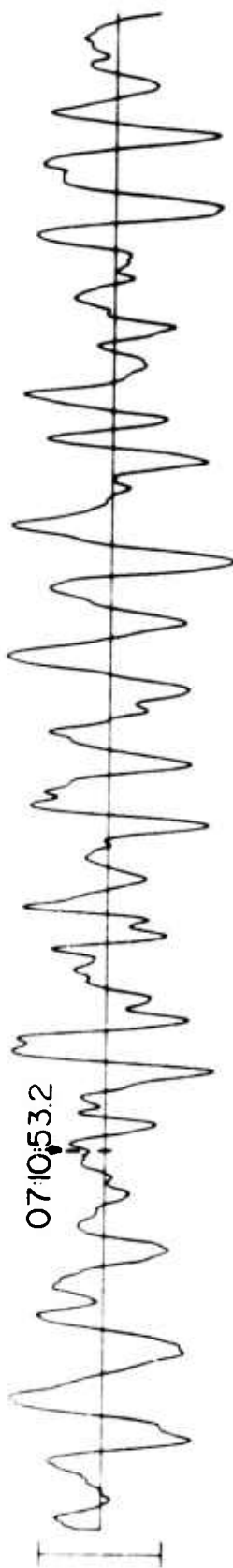


07:10:40

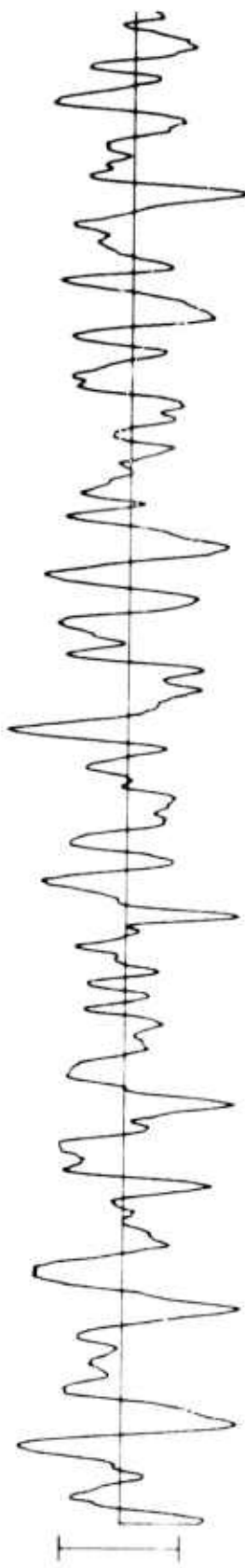
HN ME 11 DEC 75

8<

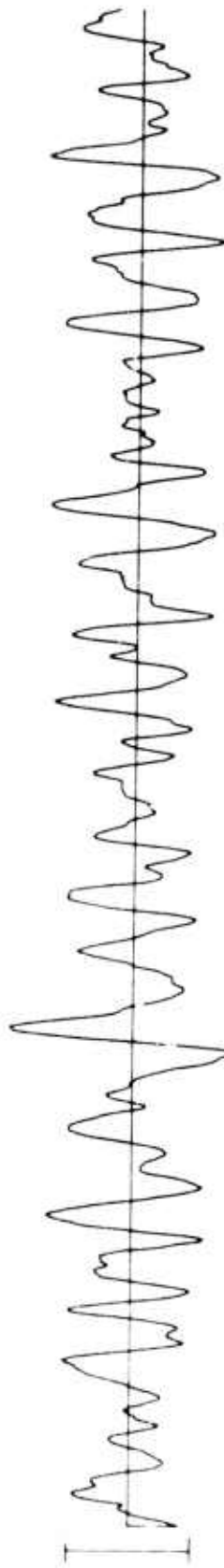
SPZ  
41.51 MU



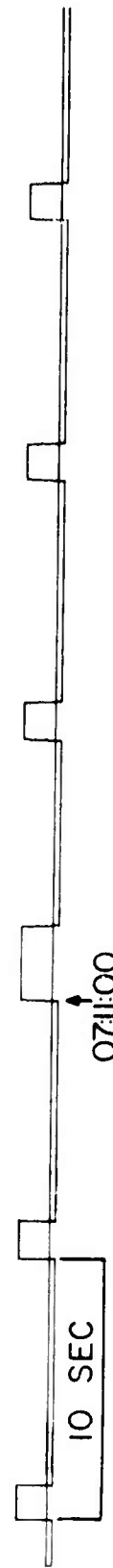
SPR  
35.41 MU



SPT  
41.67 MU



TIME



0711:00

9<

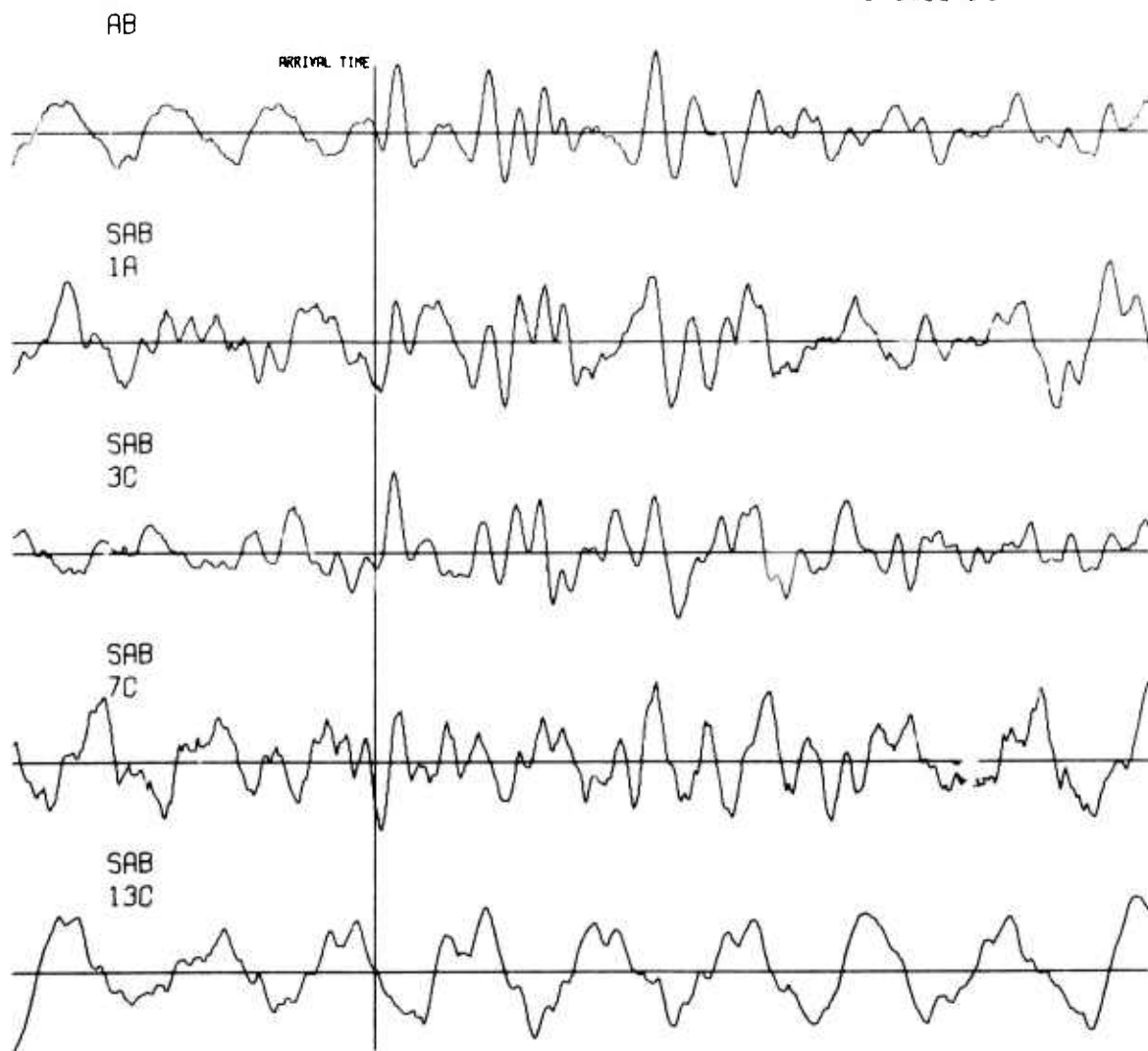
NORSAR EVENT FILE

1975 DEC 11

EPX NO. 22030 ARR. 7.13.52.3 48.6N 128.6W 4.3MB 33KM

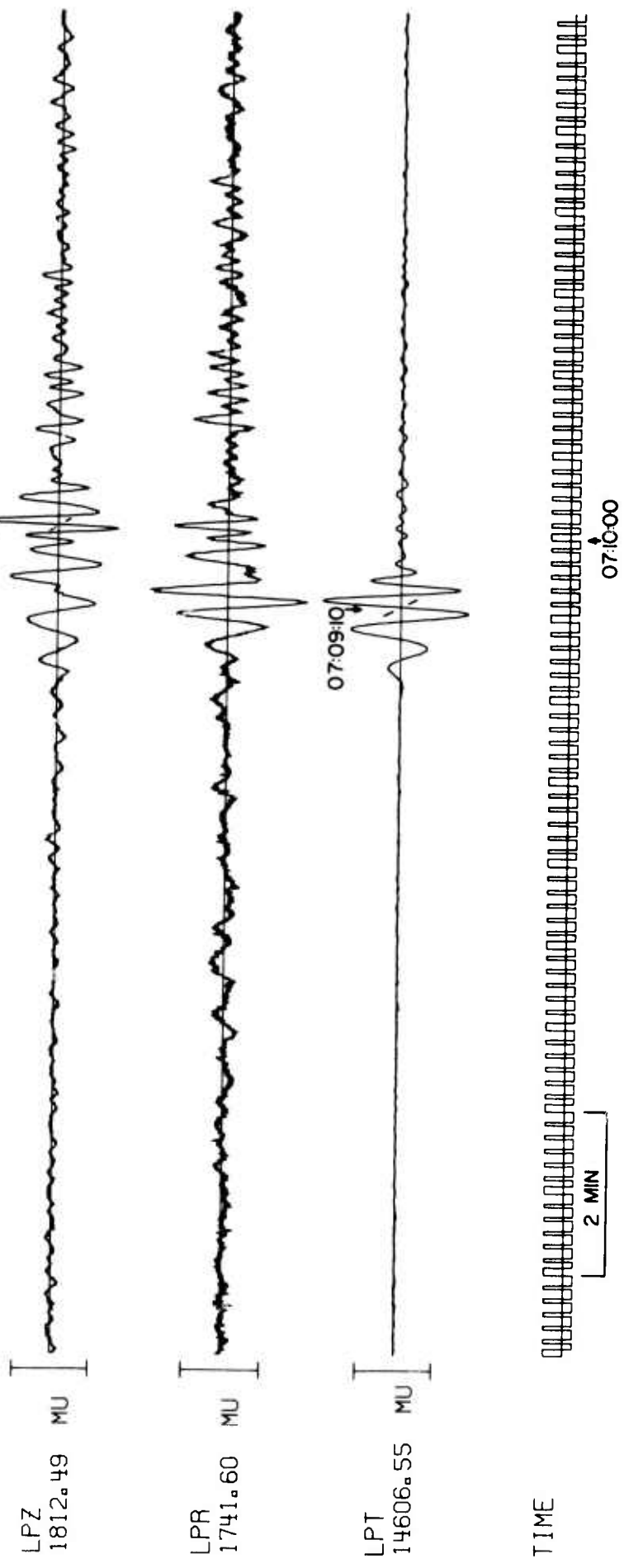
DIST = 66.1 AZI = 331.8 AMP = 4.6 PER = 1.3

————— = 5 SECONDS



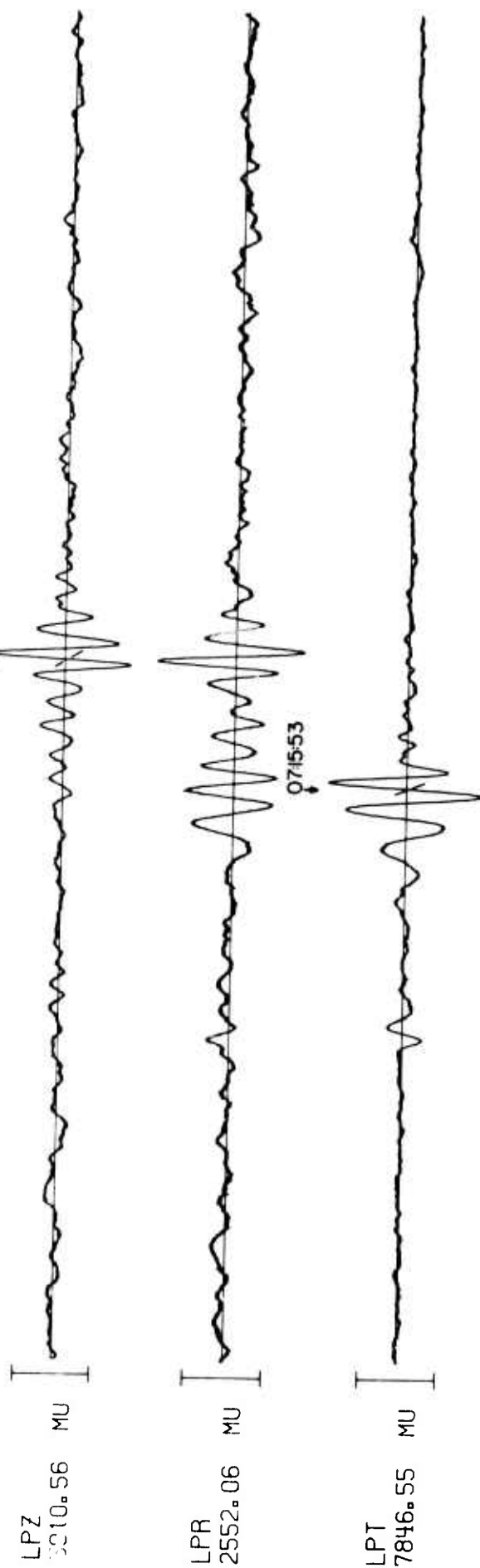
10<

WH2YK 11 DEC 75



11<

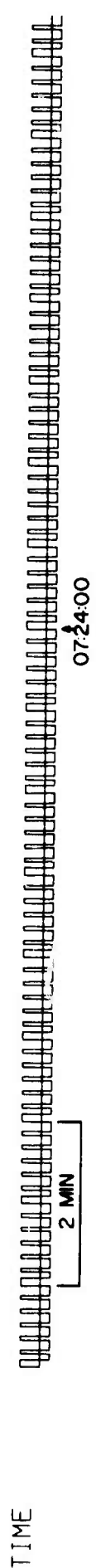
RK-ON 11 DEC 75





12<

CPSO 11 DEC 75



13<

FN-WV 11 DEC 75



14<

HN-ME 11 DEC 75

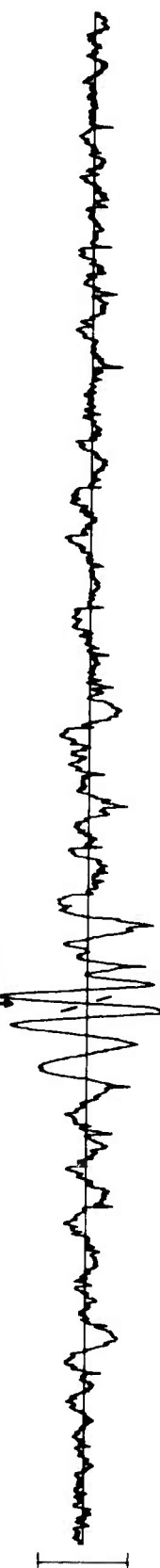
LPZ  
2019.68 MU



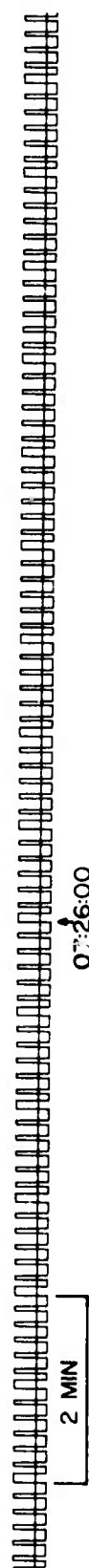
LPR  
3674.20 MU



LPT  
4899.04 MU



TIME



15<

# ARRAY LONG PERIOD VERTICAL BEAMS 11 DEC 75

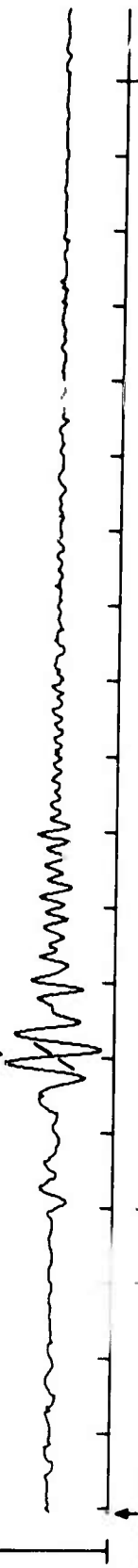
ALPA

LP VERTICAL  
561.44 Mu

07:13:00

07:06:54

1 MIN



NORSAR

LP VERTICAL  
795.46 Mu

07:43:10

07:30:32

1 MIN

